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APR 14 2004

OFFICIAL

TELECOPY LEAD PAGE  
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DATE: April 14, 2004PAGES: 40 (INCLUDING LEAD PAGE)ATTENTION: UNITED STATES PATENT AND TRADEMARK OFFICEFAX NUMBER: 1-703-872-9306SECRETARY: Janet Narduzzi (Direct Dial No. 216-896-2917)

## MESSAGE

Re: Serial No. 09/607,864

"Composites Comprising Fibers Dispersed In a Polymer Matrix Having  
Improved Shielding With Lower Amounts of Conductive Fibers".

Examiner: Lawrence D. Ferguson.

Attached is a Petition and supporting documents relative to the above-  
identified matter. Please feel free to contact the undersigned if you have any  
questions which would expedite this application.

John Molnar

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APR 14 2004

**OFFICIAL**Appl. No. Serial No. 09/607,864  
Petition dated April 14, 2004**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 09/607,864  
Applicant : Andrew B. Woodside, *et al.*  
Filed : June 30, 2000  
Title : Composites Comprising Fibers Dispersed in a  
Polymer Matrix Having Improved Shielding  
with Lower Amounts of Conductive Fibers  
TC/A.U. : 1744  
Examiner : Lawrence D. Ferguson

Honorable Commissioner For Patents  
Alexandria, VA 22313-1450**PETITION**

This is a petition for entry of a response in connection with the above-captioned application. It is respectfully requested that the Office enter the response filed herewith to the Office action dated November 14, 2004.

That action set a 3 month period for reply extendible under the provisions of 37 CFR 1.136(a). Notwithstanding, on March 15, 2004, the Office issued a Notice of Abandonment. It appears that the action was intended to be a notice of noncompliant amendment setting a 30 day period for reply. By what appears to be an Office mistake, the action actually sent was actually a copy of an earlier action dated April 9, 2003, to which Applicant had responded in an amendment dated September 16, 2003 which was found to be noncompliant. A compliant response, along with a petition and fee for an extension of time, accompanies this petition.

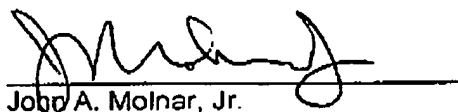
In support of this petition, copies of the following documents are submitted herewith:

- (1) Office action dated April 9, 2003 ("Exhibit A").
- (2) Amendment dated September 16, 2003 ("Exhibit B"), responsive to the Office action of April 9, 2003.
- (3) Office action dated November 14, 2003 ("Exhibit C"), setting a 3 month period for reply.
- (4) Notice of Abandonment ("Exhibit").

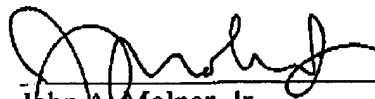
Favorable consideration of this Petition is respectfully requested.

**CERTIFICATE OF TRANSMISSION**

I hereby certify that this Communication is being sent by facsimile service to Patent Technology Center 2100 at (703) 872-9306 on this 14<sup>th</sup> day of April, 2004.

  
John A. Molnar, Jr.

Respectfully submitted,

  
John A. Molnar, Jr.  
Reg. No. 36,611  
PARKER-HANNIFIN CORPORATION  
6035 Parkland Boulevard  
Cleveland, OH 44124-4141  
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## EXHIBIT A



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSION OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,864	06/30/2000	Andrew Bencich Woodside	24760A	9951

7590 04/09/2003  
John A. Molnar, Jr.  
Parker-Hannifin Corporation  
6035 Parkland Boulevard  
Cleveland, OH 44124-4141



EXAMINER
FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
1774	16

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,864

Applicant( )

WOODSIDE ET AL.

Examiner

Lawrence D Ferguson

Art Unit

1774

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

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**DETAILED ACTION**

**Response to Amendment**

1. This action is in response to the RCE mailed January 21, 2003. Claim 15 was amended rendering claims 15-27 pending.

**New Matter - 35 U.S.C. 112**

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. '...being selected to be impregnable into said core without substantial pressurization' is not supported by the specification.

**Claim Rejections – 35 USC § 103(a)**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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Invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642).
6. Kosuga shows pellets for making electromagnetic wave shielding material comprising carbon conductive fibers (column 2, lines 26-27), an organic coating of a thermoplastic resin oligomer having a viscosity of not more than 10,000 centipoises when melted (column 1, lines 21-28 and claim 1), and a thermoplastic resin coating (polymer coating) (claim 1). Kosuga shows that the fibers have a length of 6mm (column 4, line 45). Kosuga further shows that the conductive fibers are bundled in groups of 1,000 to 10,000 (column 2, lines 30-32). The reference shows that the thermoplastic resin coating comprises acrylonitrile-butadiene-styrene copolymer (claim 3). Though Kosuga shows that the organic thermoplastic resin oligomer material has a viscosity of no more than 10,000 centipoises when melted (claim 1), Kosuga does not show that the pellets have a viscosity at temperatures of from 80 C-180 C as in instant claims 15 and 19-22. Kosuga uses the same organic thermoplastic resin oligomer materials as in Applicants' invention. Thus, it would have been obvious to one of ordinary skill in the art to use an organic material which has a viscosity of no greater than 1500 centipoises at temperature ranges of 80 C-180 C since it is known in the art that such oligomers would have those viscosities.

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***Claim Rejections – 35 USC § 103(a)***

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S. 4,356,228).

8. Kosuga is relied upon for claims 15-23 and 25-27. Kosuga shows that the organic thermoplastic resin oligomers used to coat the conductive carbon fibers include polyester resins and ethylene-ethylacrylate resins (claims 2-4). Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24.

Kobayashi teaches a fiber-reinforced moldable sheet comprising a thermoplastic resin and reinforcing agents of carbon fibers incorporated into the thermoplastic resin (Abstract). Kobayashi teaches that the thermoplastic resins used include polyesters (column 3, lines 64-68), poly(bisphenol A carbonate), polysulfones, styrene resins, and acrylic resins (column 4, lines 1-4). Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23).

*murphy o/s*

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***Response to Arguments***

9. Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) have been considered but are unpersuasive. Applicant argues Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24. Claim 24 was not rejected solely by the Kosuga reference but by Kosuga in view of Kobayashi, therefore this argument is moot. Applicant argues the very low viscosity materials encompassed by claim 19-22 would appear to be far outside the range of materials contemplated by Kosuga because Kosuga materials require the use of extruders or other high-pressure application to effect the impregnation of the fibers, whereas the instantly claimed materials may be impregnated using a bath or other low pressure means. Applicant is arguing process limitations, which are not under consideration (see *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966). Furthermore, Applicant amended claim 15 to claim 'without substantial pressure' but argues using a low pressure means to impregnate the article. A low pressure means is equivalent to a pressure means. Kosuga shows organic thermoplastic resins which have a viscosity of no more than 10,000 centipoises, which includes 1500 centipoises. This clearly falls within the ranges which Applicant's claim in instant claims 15 and 19-22.

Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S.



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4,356,228) have been considered but are unpersuasive. Applicant argues Kosuga does not disclose the oligomers listed in claim 24. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Clr. 1986). Applicant argues the resins used in Kobayashi appear to be used as a matrix resin rather than coated fibers in a matrix resin to form a pellet. Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

Applicant argues the claimed and reference materials can have different viscosities even if the chemical constituents of those materials are the same. This argument lacks sufficient support. Applicant argues independent claim 15 was amended to include 'selected to be impregnable into said core without substantial pressurization.' This amended limitation has been found to be new matter and the argument is therefore moot. Applicant argues Kosuga requires the use of pressure to impregnate the fibers whereas the instantly claimed materials may be impregnated using low pressure. Whether high or low, both the references and instantly claimed invention use pressure to impregnate the fibers. Furthermore, whether using a bath or dip coating, Applicant is arguing limitations not set forth in the claims.

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In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., whether using a bath, dip coating or amount of pressure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues the combined teaching lacks motivation to combine. Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Applicant argues the resins in Kobayashi appear to be used as the matrix resin rather than as a coating which is applied to the fibers and are encased in a matrix resin to form a pellet. Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

### **Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703)

## EXHIBIT B

Will the Patent and Trademark Office kindly stamp and return the within postcard as an indication that the accompanying documents have been received:

Applicant: Andrew B. Woodside, et al

Serial No.: 09/607,864


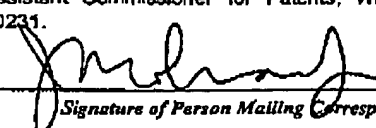
Title: Composites Comprising Fibers Dispersed In A Polymer  
Matrix Having Improved Shielding With Lower Amounts  
of Conductive Fiber

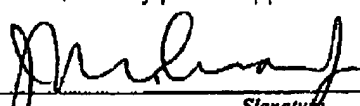



Examiner: Lawrence Ferguson

Group: 1744

Documents Transmitted: Amendment Transmittal  
Petition for Extension of Time  
Amendment



<b>PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)</b> <b>(Large Entity)</b>			Docket No.
In Re Application Of: <b>ANDREW B. WOODSIDE, et al</b>			
Serial No. 09/607,864	Filing Date 06/30/2000	Examiner Lawrence Ferguson	Group Art Unit 1744
Invention: <b>COMPOSITES COMPRISING FIBERS DISPERSED IN A POLYMER MATRIX HAVING IMPROVED SHIELDING WITH LOWER AMOUNTS OF CONDUCTIVE FIBERS</b>			
<u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u>			
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of <u>04/09/03</u> above-identified application. <span style="margin-left: 100px;"><i>Date</i></span>			
The requested extension is as follows (check time period desired): <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> One month</div><div><input type="checkbox"/> Two months</div><div><input checked="" type="checkbox"/> Three months</div><div><input type="checkbox"/> Four months</div><div><input type="checkbox"/> Five months</div></div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"><div>from: <u>07/10/03</u> <span style="margin-left: 40px;"><i>Date</i></span></div><div>until: <u>10/09/03</u> <span style="margin-left: 40px;"><i>Date</i></span></div></div>			
The fee for the extension of time is \$930 and is to be paid as follows: <div style="margin-left: 20px;"><input type="checkbox"/> A check in the amount of the fee is enclosed. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. 16-0325 A duplicate copy of this sheet is enclosed. <input checked="" type="checkbox"/> If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. 16-0325 A duplicate copy of this sheet is enclosed.</div>			
 <span style="margin-left: 100px;"><i>Signature</i></span>		Dated: 09/16/2003	
JOHN A. MOLNAR, JR. Reg. No. 36,611 Parker-Hannifin Corporation 6035 Parkland Boulevard Cleveland, Ohio 44124-4141 Phone: 216-896-2212 Fax: 216-896-4027 e-mail: jmolnar@parker.c m		<div style="font-size: small;">I certify that this document and fee is being deposited on 09/16/2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.</div> <div style="text-align: center; margin-top: 10px;"> <i>Signature of Person Mailing Correspondence</i></div> <div style="text-align: center; margin-top: 10px;"><b>JOHN A. MOLNAR, JR.</b> <small>Typed or Printed Name of Person Mailing Correspondence</small></div>	
cc: CUSTOMER NO. 23984			

<b>AMENDMENT TRANSMITTAL LETTER (Large Entity)</b>				<b>Docket No.</b>		
Applicant(s): <b>ANDREW B. WOODSIDE, et al</b>						
<b>Serial No.</b> 09/607,864	<b>Filing Date</b> 06/30/2000	<b>Examiner</b> Lawrence Ferguson		<b>Group Art Unit</b> 1744		
Invention: <b>COMPOSITES COMPRISING FIBERS DISPERSED IN A POLYMER MATRIX HAVING IMPROVED SHIELDING WITH LOWER AMOUNTS OF CONDUCTIVE FIBERS</b>						
<u>TO THE ASSISTANT COMMISSIONER FOR PATENTS:</u>						
Transmitted herewith is an amendment in the above-identified application. The fee has been calculated and is transmitted as shown below.						
<b>CLAIMS AS AMENDED</b>						
	<b>CLAIMS REMAINING AFTER AMENDMENT</b>	<b>HIGHEST # PREV. PAID FOR</b>	<b>NUMBER EXTRA CLAIMS PRESENT</b>	<b>RATE</b>	<b>ADDITIONAL FEE</b>	
<b>TOTAL CLAIMS</b>	18 -	20 =	0 x	\$18.00	\$0.00	
<b>INDEP. CLAIMS</b>	2 -	3 =	0 x	\$84.00	\$0.00	
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00	
<b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT</b>					<b>\$0.00</b>	
 <input type="checkbox"/> No additional fee is required for amendment. <input checked="" type="checkbox"/> Please charge Deposit Account No. 16-0325 in the amount of \$0.00 A duplicate copy of this sheet is enclosed. <input type="checkbox"/> A check in the amount of to cover the filing fee is enclosed. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 16-0325 A duplicate copy of this sheet is enclosed. <input checked="" type="checkbox"/> Any additional filing fees required under 37 C.F.R. 1.16. <input type="checkbox"/> Any patent application processing fees under 37 CFR 1.17.						
 _____ Signature			Dated: 09/16/2003			
<b>JOHN A. MOLNAR, JR.</b> Reg. No. 36,611 Parker-Hannifin Corporation 6035 Parkland Boulevard Cleveland, Ohio 44124-4141 Phone: 216-896-2212 Fax: 216-896-4027 e-mail: jmolnar@parker.com						
cc: CUSTOMER NO. 23984						
<table border="1" style="width:100%"><tr><td>I certify that this document and fee is being deposited on 09/16/2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20234.  _____ Signature of Person Mailing Correspondence  <b>JOHN A. MOLNAR, JR.</b> _____ Typed or Printed Name of Person Mailing Correspondence</td></tr></table>						I certify that this document and fee is being deposited on 09/16/2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20234.  _____ Signature of Person Mailing Correspondence  <b>JOHN A. MOLNAR, JR.</b> _____ Typed or Printed Name of Person Mailing Correspondence
I certify that this document and fee is being deposited on 09/16/2003 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20234.  _____ Signature of Person Mailing Correspondence  <b>JOHN A. MOLNAR, JR.</b> _____ Typed or Printed Name of Person Mailing Correspondence						

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Appl. No. Serial No. 09/607,864  
Amdt. dated September 16, 2003  
Reply to Office action of April 9, 2003

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 09/607,864  
Applicant : Andrew B. Woodside, *et al.*  
Filed : June 30, 2000  
Title : Composites Comprising Fibers Dispersed in a  
Polymer Matrix Having Improved Shielding  
with Lower Amounts of Conductive Fibers

TC/A.U. : 1744  
Examiner : Lawrence D. Ferguson

Docket No. :

Honorable Commissioner For Patents  
Alexandria, VA 22313-1450

**AMENDMENT**

In response to the Office action of April 9, 2003, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of the claims which begins on page 2 of this paper.

Remarks begin on page 4 of this paper.

Appl. No. Serial No. 09/607,864  
Amdt. dated September 16, 2003  
Reply to Office action of April 9, 2003

This listing of claims will replace all prior versions, and listing, of claims in the application.

**Listing of Claims:**

Claims 1-14 (previously withdrawn).

Claim 15 (currently amended): A plurality of pellets capable of being consolidated into an electrically shielded composite wherein said pellets comprise a core of conductive fibers; wherein said core has a coating comprising an organic material having a viscosity at a temperature range of from 80 °C – 180 °C no greater than 1500 200 cps ~~and being selected to be impregnable into said core without substantial pressurization; and wherein said core and said coating are encased by a polymer.~~

Claim 16 (original): The pellets of claim 15 wherein the pellets are capable of being consolidated into a composite without the addition of any other material.

Claim 17 (previously amended): The pellets of claim 15 wherein the pellets have an average length of between 2mm to 12mm.

Claims 18-22 (cancelled).

Claim 23 (original): The pellets of claim 15 wherein the organic material comprises monomers or oligomers or mixtures thereof.

Claim 24 (previously amended): The pellets of claim 15 wherein the organic material is chosen from the group consisting of bisphenol A, propoxylated bisphenol A, diphenyl ether, diphenyl sulfone, stilbene, diglycidyl ether of bisphenol A, triglycidylisocyanurate, citric acid, pentaerythritol, dicyandiamide, 4,4'-sulfonyldianiline, 3,3'-sulfonyldianiline, stearate-capped propyleneglycol fumarate oligomer, butoxyethylstearate, ethylene carbonate, sorbitan monostearate, hydrogenated vegetable oil, and mixtures thereof.

Claim 25 (original): The pellets of claim 15 wherein the polymer is a thermoset or thermoplastic polymer.

Claim 26 (previously amended): The composite of claim 15 wherein the polymer is chosen from the group consisting of polycarbonate, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene copolymer, polybutylene terephthalate, styrene, polypropylene, and nylon.

Claims 28-30 (previously withdrawn).

Claim 31 (new): A plurality of pellets capable of being consolidated into an electrically shielded composite wherein said pellets comprise a core of conductive fibers; wherein said core has a

Appl. No. Serial No. 09/607,864  
Armdt. dated September 16, 2003  
Reply to Office action of April 9, 2003

coating comprising an organic material having a viscosity at a temperature range of from 80 °C – 180 °C no greater than 1500 cps, wherein the organic material comprises a monomer.

Claim 32 (new): The pellets of claim 31 wherein the pellets are capable of being consolidated into a composite without the addition of any other material.

Claim 33 (new): The pellets of claim 31 wherein the pellets have an average length of between 2mm to 12mm.

Claim 34 (new): The pellets of claim 31 wherein the core is a strand comprising bundles of at least 40 conductive fibers.

Claim 35 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 400 cps.

Claim 36 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 200 cps.

Claim 37 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 75 cps.

Claim 38 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 5 cps.

Claim 39 (new): The pellets of claim 31 wherein the organic material is chosen from the group consisting of bisphenol A, propoxylated bisphenol A, diphenyl ether, diphenyl sulfone, stilbene, diglycidyl ether of bisphenol A, triglycidylisocyanurate, citric acid, pentaerythritol, dicyandiimide, 4,4'-sulfonyldianiline, 3,3'-sulfonyldianiline, butoxyethylstearate, ethylene carbonate, sorbitan monostearate, hydrogenated vegetable oil, and mixtures thereof.

Claim 40 (new): The pellets of claim 31 wherein the polymer is a thermoset or thermoplastic polymer.

Claim 41 (new): The composite of claim 31 wherein the polymer is chosen from the group consisting of polycarbonate, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene copolymer, polybutylene terephthalate, styrene, polypropylene, and nylon.



Appl. No. Serial No. 09/607,864  
Amdt. dated September 16, 2003  
Reply to Office action of April 9, 2003

### REMARKS

Reconsideration of the above-identified application as amended respectfully is solicited on behalf of the Applicants.

With the instant response, one (1) claim, namely independent claim 15, has been amended in order to materially advance the status of the present prosecution. Original claims 18-22 have been cancelled as being inconsistent with the present amendment to claim 15. Claims 31-41 are newly-added.

Claim 15 has been rejected under 35 USC § 112, first paragraph. With the present response, the language found objectionable by the examiner has been deleted from the claim.

Claims 15-23 and 25-27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kosuga *et al.* reference in view of Kobayashi *et al.*, U.S. Patent No. 4,356,228. Claims 15, 16, and 19-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kosuga *et al.* reference.

Regarding independent claim 15, and as mentioned, the Examiner has noted that the Kosuga *et al.* reference "does not show that the pellets have such a viscosity at temperatures of from 80°C - 180°C." However, the Examiner considers Kosuga to use the same organic thermoplastic resin oligomer materials as Applicants.

With the present response, claim 15 has been amended to recite that the organic material has a viscosity of "no greater than 200 cps." In this regard, MPEP § 2144.05 may be instructive insofar as the Kogusa reference appears to disclose a range "so broad as to encompass a very large number of possible distinct compositions," citing *In re Peterson*, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003), and thus "might present a situation analogous to the obviousness of a species when the prior art broadly discloses a genus." *Id.* In such a situation, an applicant can rebut a *prima facie* case of obviousness based on overlapping ranges by showing that the claimed range achieves unexpected results relative to the prior art range, MPEP § 2144.05 citing *In re Woodruff*, 16 USPQ2d 1034 (Fed. Cir. 1990), or by showing that the art teaches away from the claimed invention, *Id.* Citing *In re Geisler*, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

As to such showings, Applicants submit that Kosuga requires the use of extruders or other high-pressure application to effect the impregnation of the fibers. In contrast, the claimed materials may be impregnated using a bath or other low pressure means. Thus, it is believed that the claimed pellets may be produced using less expensive and complicated equipment and, accordingly, more economically than those of Kosuga. Such is a result and advantage of the claimed invention which could not be predicted from the teachings of Kogusa. Indeed, as Kogusa teaches the use of extruders, it is submitted that one of ordinary skill following those teachings would not have been motivated to select, within the realm of the materials encompassed by Kogusa, those having low viscosities approaching that of water which would not be amenable to the drag induced flow produced in extruders.

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Amdt. dated September 16, 2003  
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It therefore is submitted that claim 15 should be considered to properly distinguish over the art made of record. Claim 16 further describes the pellets of claim 15, and likewise should be considered allowable for the reasons given in connection therewith. Claims 16-17, 23 and 25-26 further describe the pellets of claim 15, and likewise should be considered allowable for the reasons given in connection therewith.

Claim 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kosuga *et al.* reference in view of Kobayashi *et al.*, U.S. Patent No. 4,356,228. The Examiner has noted that the Kosuga reference does not show the oligomers listed in claim 24. The Kobayashi reference has been cited as disclosing carbon fiber reinforced composites which include as the matrix resins polyesters, poly(bisphenol A carbonate), polysulfones, styrene resins, and acrylic resins. The Examiner is of the opinion that it would have been obvious to use a bisphenol A resin in the organic thermoplastic resin oligomer coating of the present invention since bisphenol A, polyester, and acrylic resins are functional equivalents.

However, and in contrast to claims 1 and 15, the resins listed in Kobayashi reference appear to be used as the matrix resin rather than, as is claimed, as a coating which is applied to the fibers and which coated fibers, in turn, are encased in a matrix resin to form a pellet. In any event, to the extent that such materials would be used as a coating, the Kobayashi reference provides no additional teaching as to the use of such materials as having a viscosity of "no greater than 200 cps." Rather, such materials appear to be encompassed by the universe of materials in Kogusa, but without any particularized teaching as to viscosity. Moreover, to the extent that the Examiner that the would consider the materials of Kobayashi to be the same as those of claim 24, it is noted that claim 24 recites "bisphenol A" while Kobayashi discloses poly(bisphenol A carbonate), *i.e.*, polycarbonate.

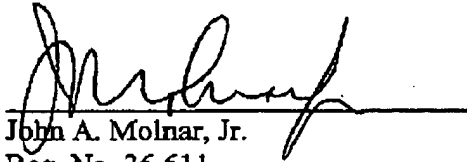
Thus, it is submitted that claim 24 should be considered to distinguish over the Kosuga and Kobayashi references, whether taken singly or in combination.

As to the newly added claims 31-41, independent claim 31 recites "an organic material having a viscosity at a temperature range of from 80 °C – 180 °C no greater than 1500 cps, *wherein the organic material comprises a monomer.*" As neither the Kogusa nor the Kobayashi reference discloses the use of monomers, claim 31 should be considered to be allowable over the art made of record. Similarly, claims 32-41 further describe the pellets of claim 1, and therefore should be considered allowable for the reasons given in connection therewith.

In view of the foregoing remarks, wherein the claim program as amended has been shown to clearly define the claimed invention as being patentable over art made of record, the issuance of a Notice of Allowance is earnestly solicited.

Appl. No. Serial No. 09/607,864  
Amdt. dated September 16, 2003  
Reply to Office action of April 9, 2003

Respectfully submitted,



John A. Molnar, Jr.

Reg. No. 36,611

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Cleveland, OH 44124-4141

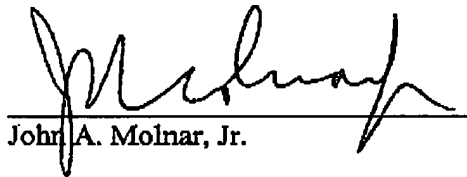
Voice: (216) 896-2212

Fax: (216) 896-4027

E-mail: jmolnar@parker.com

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited on September 16, 2003, with the United Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



John A. Molnar, Jr.



EXHIBIT C  
UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
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Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,864	06/30/2000	Andrew Bencich Woodside	24760A	9951
7590	11/14/2003			
John A. Molnar, Jr. Parker-Hannifin Corporation 61035 Parkland Boulevard Cleveland, OH 44124-4141			EXAMINER FERGUSON, LAWRENCE D	
			ART UNIT 1774	PAPER NUMBER

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

09/607,864

Applicant(s)

WOODSIDE ET AL.

Examin r

Lawrence D Ferguson

Art Unit

1774

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 135).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Page 2

### **DETAILED ACTION**

#### ***Response to Amendment***

1. This action is in response to the RCE mailed January 21, 2003. Claim 15 was amended rendering claims 15-27 pending.

#### ***New Matter - 35 U.S.C. 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. '...being selected to be impregnable into said core without substantial pressurization' is not supported by the specification.

#### ***Claim Rejections - 35 USC § 103(a)***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642).
6. Kosuga shows pellets for making electromagnetic wave shielding material comprising carbon conductive fibers (column 2, lines 26-27), an organic coating of a thermoplastic resin oligomer having a viscosity of not more than 10,000 centipoises when melted (column 1, lines 21-28 and claim 1), and a thermoplastic resin coating (polymer coating) (claim 1). Kosuga shows that the fibers have a length of 6mm (column 4, line 45). Kosuga further shows that the conductive fibers are bundled in groups of 1,000 to 10,000 (column 2, lines 30-32). The reference shows that the thermoplastic resin coating comprises acrylonitrile-butadiene-styrene copolymer (claim 3). Though Kosuga shows that the organic thermoplastic resin oligomer material has a viscosity of no more than 10,000 centipoises when melted (claim 1), Kosuga does not show that the pellets have a viscosity at temperatures of from 80 C-180 C as in instant claims 15 and 19-22. Kosuga uses the same organic thermoplastic resin oligomer materials as in Applicants' invention. Thus, it would have been obvious to one of ordinary skill in the art to use an organic material which has a viscosity of no greater than 1500 centipoises at temperature ranges of 80 C-180 C since it is known in the art that such oligomers would have those viscosities.

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***Claim Rejections – 35 USC § 103(a)***

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S. 4,356,228).

8. Kosuga is relied upon for claims 15-23 and 25-27. Kosuga shows that the organic thermoplastic resin oligomers used to coat the conductive carbon fibers include polyester resins and ethylene-ethylacrylate resins (claims 2-4). Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24.

Kobayashi teaches a fiber-reinforced moldable sheet comprising a thermoplastic resin and reinforcing agents of carbon fibers incorporated into the thermoplastic resin (Abstract). Kobayashi teaches that the thermoplastic resins used include polyesters (column 3, lines 64-68), poly(bisphenol A carbonate), polysulfones, styrene resins, and acrylic resins (column 4, lines 1-4). Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23).



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***Response to Arguments***

9. Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) have been considered but are unpersuasive. Applicant argues Kosuga does not show that the organic thermoplastic resin oligomers are comprised of those listed in instant claim 24. Claim 24 was not rejected solely by the Kosuga reference but by Kosuga in view of Kobayashi, therefore this argument is moot. Applicant argues the very low viscosity materials encompassed by claim 19-22 would appear to be far outside the range of materials contemplated by Kosuga because Kosuga materials require the use of extruders or other high-pressure application to effect the impregnation of the fibers, whereas the instantly claimed materials may be impregnated using a bath or other low pressure means. Applicant is arguing process limitations, which are not under consideration (see *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966). Furthermore, Applicant amended claim 15 to claim 'without substantial pressure' but argues using a low pressure means to impregnate the article. A low pressure means is equivalent to a pressure means. Kosuga shows organic thermoplastic resins which have a viscosity of no more than 10,000 centipoises, which includes 1500 centipoises. This clearly falls within the ranges which Applicant's claim in instant claims 15 and 19-22.

Applicant's arguments in regard to rejection made under 35 USC 103(a) as being unpatentable over Kosuga et al (U.S. 4,960,642) in view of Kobayashi et al (U.S.

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4,356,228) have been considered but are unpersuasive. Applicant argues Kosuga does not disclose the oligomers listed in claim 24. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant argues the resins used in Kobayashi appear to be used as a matrix resin rather than coated fibers in a matrix resin to form a pellet. Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

Applicant argues the claimed and reference materials can have different viscosities even if the chemical constituents of those materials are the same. This argument lacks sufficient support. Applicant argues independent claim 15 was amended to include 'selected to be impregnable into said core without substantial pressurization.' This amended limitation has been found to be new matter and the argument is therefore moot. Applicant argues Kosuga requires the use of pressure to impregnate the fibers whereas the instantly claimed materials may be impregnated using low pressure. Whether high or low, both the references and instantly claimed invention use pressure to impregnate the fibers. Furthermore, whether using a bath or dip coating, Applicant is arguing limitations not set forth in the claims.

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In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., whether using a bath, dip coating or amount of pressure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues the combined teaching lacks motivation to combine. Kosuga and Kobayashi are analogous art because they are both from the field of carbon fiber material. It would have been obvious to one of ordinary skill in the art to use bisphenol A resin in the organic thermoplastic resin oligomer coating of Kosuga because bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Applicant argues the resins in Kobayashi appear to be used as the matrix resin rather than as a coating which is applied to the fibers and are encased in a matrix resin to form a pellet. . Bisphenol A, polyester, and acrylic resins are thermoplastic resinous materials used in order to obtain an impregnated product (column 4, lines 1-23). Kobayashi shows the thermoplastic resins are conventional and can be used in a matrix resin, which ultimately is used to form a pellet.

### **Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703)

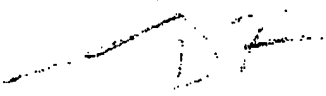
Application/Control Number: 09/607,864

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305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



Lawrence D. Ferguson  
Examiner  
Art Unit 1774



## EXHIBIT D

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1430  
Alexandria, Virginia 22313-1430  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,864	06/30/2000	Andrew Bencich Woodside	24760A	9951

7590 03/15/2004

John A. Molnar, Jr.  
Parker-Hannifin Corporation  
61035 Parkland Boulevard  
Cleveland, OH 44124-4141

EXAMINER

FERGUSON, LAWRENCE D

ART UNIT PAPER NUMBER

1774

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Notice of Abandonment</b>	Application No.	Applicant(s)	
	09/607,864	WOODSIDE ET AL.	
	Examiner	Art Unit	
	Lawrence D Ferguson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

- ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 14 November 2003.
  - ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - ☒ A reply was received on 22 September 2003 but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - ☐ No reply has been received.
- ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - ☐ The issue fee and publication fee, if applicable, has not been received.
- ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - ☐ No corrected drawings have been received.
- ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
- ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
- ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
- ☒ The reason(s) below:  
  
John Molar was called to be informed a proper reply to the Office Action mailed on April 9, 2003 has not been filed, resulting in the case going abandoned. The reply sent on September 22, 2003 was non-compliant.

Positions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

**Notice of Abandonment**

Application No.

09/607,864

Examiner

Lawrence D Ferguson

Applicant(s)

WOODSIDE ET AL.

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 14 November 2003.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☒ A reply was received on 22 September 2003 but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☐ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34 (a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☒ The reason(s) below:

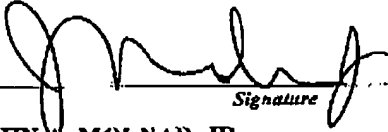
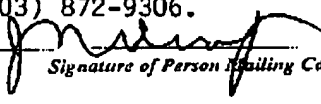
John Molar was called to be informed a proper reply to the Office Action mailed on April 9, 2003 has not been filed, resulting in the case going abandoned. The reply sent on September 22, 2003 was non-compliant.

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

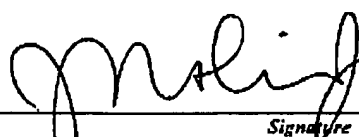
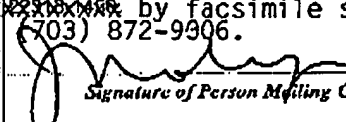
U.S. Patent and Trademark Office

Notice of Abandonment

Part of Paper No. 20040310

<b>PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)</b> <b>(Large Entity)</b>			Docket No.
In Re Application Of: <b>ANDREW B. WOODSIDE, et al</b>			
Serial No. 09/607,864	Filing Date 06/30/2000	Examiner Lawrence Ferguson	Group Art Unit 1744
Invention: <b>COMPOSITES COMPRISING FIBERS DISPERSED IN A POLYMER MATRIX HAVING IMPROVED SHIELDING WITH LOWER AMOUNTS OF CONDUCTIVE FIBERS</b>			
<u><b>TO THE COMMISSIONER FOR PATENTS:</b></u>			
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of <u>11/14/2003</u> above-identified application. <div style="text-align: center; font-size: small;">Date</div>			
The requested extension is as follows (check time period desired): <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> <input type="checkbox"/> One month     <input checked="" type="checkbox"/> Two months     <input type="checkbox"/> Three months     <input type="checkbox"/> Four months     <input type="checkbox"/> Five months </div> <div style="width: 35%;"> from: <u>February 15, 2004</u>     until: <u>April 14, 2004</u>  <div style="display: flex; justify-content: space-between; font-size: x-small;"> <span>Date</span> <span>Date</span> </div> </div> </div>			
The fee for the extension of time is <b>\$410</b> and is to be paid as follows: <input type="checkbox"/> A check in the amount of the fee is enclosed. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No. <b>16-0325</b> <input checked="" type="checkbox"/> If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. <b>16-0325</b>			
 <div style="text-align: center; font-size: x-small;">Signature</div>		Dated: <b>April 14, 2004</b>	
<b>JOHN A. MOLNAR, JR.</b> Reg. No. 36,611 Parker-Hannifin Corporation 6035 Parkland Boulevard Cleveland, Ohio 44124-4141 Phone: 216-896-2212 Fax: 216-896-4027 e-mail: jmolnar@parker.com		<div style="border: 1px solid black; padding: 5px;"> I certify that this document and fee is being deposited on 04/14/2004 to <del>XXXXXX XXXX Postal Service XXXX</del>  <del>XXXXXX MAIL ROOM 3705 F.B. XXXXX</del> addressed to  Commissioner for Patents, <del>XXXXXX XXXX</del>  <del>XXXXXX XXXX</del> by facsimile service at  (703) 872-9306.    <div style="text-align: center; font-size: x-small;">Signature of Person Mailing Correspondence</div> </div> <div style="text-align: center; padding-top: 5px;"> <b>JOHN A. MOLNAR, JR.</b>  <div style="font-size: x-small;">Typed or Printed Name of Person Mailing Correspondence</div> </div>	
cc: CUSTOMER NO. 23984			



<b>AMENDMENT TRANSMITTAL LETTER (Large Entity)</b>				Docket No.	
Applicant(s): <b>ANDREW B. WOODSIDE, et al</b>					
Serial No. <b>09/607,864</b>	Filing Date <b>06/30/2000</b>	Examiner <b>Lawrence Ferguson</b>	Group Art Unit <b>1744</b>		
Invention: <b>COMPOSITES COMPRISING FIBERS DISPERSED IN A POLYMER MATRIX HAVING IMPROVED SHIELDING WITH LOWER AMOUNTS OF CONDUCTIVE FIBERS</b>					
<u><b>TO THE COMMISSIONER FOR PATENTS:</b></u>					
Transmitted herewith is an amendment in the above-identified application.					
The fee has been calculated and is transmitted as shown below.					
<b>CLAIMS AS AMENDED</b>					
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	18 -	20 =	0 x	\$18.00	\$0.00
INDEP. CLAIMS	2 -	3 =	0 x	\$84.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
<b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT</b>					<b>\$0.00</b>
 <input type="checkbox"/> No additional fee is required for amendment.					
<input checked="" type="checkbox"/> Please charge Deposit Account No. <b>16-0325</b> in the amount of <b>\$0.00</b>					
<input type="checkbox"/> A check in the amount of _____ to cover the filing fee is enclosed.					
<input checked="" type="checkbox"/> The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. <b>16-0325</b>					
<input checked="" type="checkbox"/> Any additional filing fees required under 37 C.F.R. 1.16.					
<input type="checkbox"/> Any patent application processing fees under 37 CFR 1.17.					
 _____ <i>Signature</i>			Dated: <b>April 14, 2004</b>		
<b>JOHN A. MOLNAR, JR.</b> Reg. No. 36,611 Parker-Hannifin Corporation 6035 Parkland Boulevard Cleveland, Ohio 44124-4141 Phone: 216-896-2212 Fax: 216-896-4027 e-mail: jmolnar@parker.com			<div style="font-size: small;">I certify that this document and fee is being deposited on 04/14/2004 to _____ Commissioner for Patents _____ by facsimile service at (703) 872-9906.</div> <div style="text-align: center;"> <i>Signature of Person Mailing Correspondence</i></div> <div style="text-align: center;"><b>JOHN A. MOLNAR, JR.</b> <i>Typed or Printed Name of Person Mailing Correspondence</i></div>		
cc: CUSTOMER NO. 23984					

Appl. No. Serial No. 09/607,864  
Supplemental Amdt. dated April 14, 2004  
Reply to Office action of November 14, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/607,864  
Applicant : Andrew B. Woodside, *et al.*  
Filed : June 30, 2000  
Title : Composites Comprising Fibers Dispersed in a  
Polymer Matrix Having Improved Shielding  
with Lower Amounts of Conductive Fibers  
  
TC/A.U. : 1744  
Examiner : Lawrence D. Ferguson  
  
Docket No. :

Honorable Commissioner For Patents  
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office action of November 14, 2003, the corrected section of the non-compliant amendment document is resubmitted herewith in its entirety.

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This listing of claims will replace all prior versions, and listing, of claims in the application.

**Listing of Claims:**

Claims 1 (withdrawn): A composite article comprising conductive fiber strands dispersed in a polymer matrix wherein said fibers have a chemical treatment coating comprising an organic material having a viscosity at a temperature range of 80 °C - 180 °C no greater than 1500 cps

Claim 2 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 800 cps.

Claim 3 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 400 cps.

Claim 4 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 200 cps.

Claim 5 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 75 cps.

Claim 6 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 25 cps.

Claim 7 (withdrawn): The composite of claim 1 wherein the viscosity of the organic material at a temperature range of 80 °C - 180 °C is no greater than 5 cps.

Claim 8 (withdrawn): The composite of claim 1 wherein the organic material comprises monomers or oligomers or mixtures thereof.

Claim 9 (withdrawn): The composite of claim 1 wherein the organic material is chosen from the group consisting of bisphenol A, propoxylated bisphenol A, diphenyl ether, diphenyl sulfone, stilbene, diglycidyl ether of bisphenol A, triglycidylisocyanurate, citric acid, pentaerythritol, dicyandiimide, 4,4'-sulfonyldianiline, 3,3'-sulfonyldianiline, stearate-capped propyleneglycol fumarate oligomer, butoxyethylstearate, ethylene carbonate, sorbitan monostearate, hydrogenated vegetable oil, and mixtures thereof.

Claim 10 (withdrawn): The composite of claim 1 wherein the polymer matrix is a thermoset or thermoplastic polymer.

Claim 11 (withdrawn): The composite of claim 1 wherein the polymer matrix is chosen from the group consisting of polycarbonate, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene copolymer, polybutylene terephthalate, styrene, polypropylene, and nylon.

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Claim 12 (withdrawn): The composite of claim 1 wherein the conductive fiber strands comprise conductive fibers chosen from a group consisting of carbon fiber, metalized carbon fiber, metalized glass fiber, metal fiber, metal alloy fiber and mixtures thereof.

Claim 13 (withdrawn): The composite of claim 1 wherein the strands have an average length of between 2mm to 12mm

Claim 14 (withdrawn): The composite of claim 1 wherein the strands comprise bundles of at least 40 conductive fibers

Claim 15 (currently amended): A plurality of pellets capable of being consolidated into an electrically shielded composite wherein said pellets comprise a core of conductive fibers; wherein said core has a coating comprising an organic material having a viscosity at a temperature range of from 80 °C – 180 °C no greater than 4500 200 cps ~~and being selected to be impregnable into said core without substantial pressurization; and wherein said core and said coating are encased by a polymer.~~

Claim 16 (original): The pellets of claim 15 wherein the pellets are capable of being consolidated into a composite without the addition of any other material.

Claim 17 (previously amended): The pellets of claim 15 wherein the pellets have an average length of between 2mm to 12mm.

Claim 18 (cancelled)

Claim 19 (cancelled)

Claim 20 (cancelled)

Claim 21 (cancelled)

Claim 22 (cancelled)

Claim 23 (original): The pellets of claim 15 wherein the organic material comprises monomers or oligomers or mixtures thereof.

Claim 24 (previously amended): The pellets of claim 15 wherein the organic material is chosen from the group consisting of bisphenol A, propoxylated bisphenol A, diphenyl ether, diphenyl sulfone, stilbene, diglycidyl ether of bisphenol A, triglycidylisocyanurate, citric acid, pentaerythritol, dicyandiamide, 4,4'-sulfonyldianiline, 3,3'-sulfonyldianiline, stearate-capped propylene glycol fumarate oligomer, butoxyethylstearate, ethylene carbonate, sorbitan monostearate, hydrogenated vegetable oil, and mixtures thereof.

Claim 25 (original): The pellets of claim 15 wherein the polymer is a thermoset or thermoplastic polymer.

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Claim 26 (previously amended): The composite of claim 15 wherein the polymer is chosen from the group consisting of polycarbonate, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene copolymer, polybutylene terephthalate, styrene, polypropylene, and nylon.

Claim 27 (original): The pellets of claim 15 wherein the core comprises chosen from the group consisting of carbon fiber, metalized carbon fiber, metalized glass fiber, metal fiber, metal alloy fiber and mixtures thereof.

Claim 28 (withdrawn): A method for making pellets capable of being consolidated into an electromagnetic shielded composite comprising the steps of:

- a) producing a chemically treated strand by coating conductive fibers with a chemical treatment comprising an organic material having a viscosity at a temperature of from 80 °C - 180 °C no greater than 1500 cps
- b) producing a sheathed strand by encasing the chemically treated strand with a polymer
- c) chopping the sheathed strand to form pellets

Claim 29 (withdrawn): A method for making an electromagnetic shielded product by consolidating the pellets of claim 15.

Claim 30 (withdrawn): A method for making an electromagnetic shielded product by consolidating the pellets of claim 28.

Claim 31 (new): A plurality of pellets capable of being consolidated into an electrically shielded composite wherein said pellets comprise a core of conductive fibers; wherein said core has a coating comprising an organic material having a viscosity at a temperature range of from 80 °C - 180 °C no greater than 1500 cps, wherein the organic material comprises a monomer.

Claim 32 (new): The pellets of claim 31 wherein the pellets are capable of being consolidated into a composite without the addition of any other material.

Claim 33 (new): The pellets of claim 31 wherein the pellets have an average length of between 2mm to 12mm.

Claim 34 (new): The pellets of claim 31 wherein the core is a strand comprising bundles of at least 40 conductive fibers.

Claim 35 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C - 180 °C no greater than 400 cps.

Claim 36 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C - 180 °C no greater than 200 cps.

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Claim 37 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 75 cps.

Claim 38 (new): The pellets of claim 31 wherein the organic material has a viscosity at a temperature range of from 80 °C – 180 °C no greater than 5 cps.

Claim 39 (new): The pellets of claim 31 wherein the organic material is chosen from the group consisting of bisphenol A, propoxylated bisphenol A, diphenyl ether, diphenyl sulfone, stilbene, diglycidyl ether of bisphenol A, triglycidylisocyanurate, citric acid, pentaerythritol, dicyandiimide, 4,4'-sulfonyldianiline, 3,3'-sulfonyldianiline, butoxyethylstearate, ethylene carbonate, sorbitan monostearate, hydrogenated vegetable oil, and mixtures thereof.

Claim 40 (new): The pellets of claim 31 wherein the polymer is a thermoset or thermoplastic polymer.

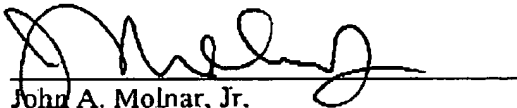
Claim 41 (new): The composite of claim 31 wherein the polymer is chosen from the group consisting of polycarbonate, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene copolymer, polybutylene terephthalate, styrene, polypropylene, and nylon.

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**REMARKS**

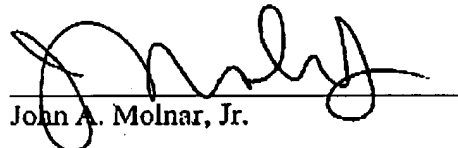
Reconsideration of the above-identified application as amended respectfully is solicited on behalf of the Applicant.

Respectfully submitted,

  
John A. Molnar, Jr.  
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PARKER-HANNIFIN CORPORATION  
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Cleveland, OH 44124-4141  
Voice: (216) 896-2212  
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**CERTIFICATE OF TRANSMISSION**

I hereby certify that this Communication is being sent by facsimile service to Patent Technology Center 2100 at (703) 872-9306 on this 14<sup>th</sup> day of April, 2004.

  
John A. Molnar, Jr.